High Resolution 37X Zoom Color Camera **SDZ-370** User's Manual

Thank you for purchasing a SAMSUNG CCD CAMERA.
Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

ENGLISH

Thank you for purchasing a **SAMSUNG CCD CAMERA**.
Before operating the camera, confirm the camera model and proper input power voltage. In order to that you can understand this manual thoroughly, we'll introduce our model description.

■ SDZ-370 SERIES

- NTSC MODEL SDZ-370N
- PAL MODEL SDZ-370P

■ MODEL DESCRIPTION

- SDZ-370X

SIGNAL SYSTEM

- SIGNAL SYSTEM
  N → NTSC MODEL
  P → PAL MODEL

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user’s authority to operate the equipment.

WARNING - To prevent electric shock and risk of fire hazards:

- ◆ Do NOT use power sources other than that specified.
- ◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

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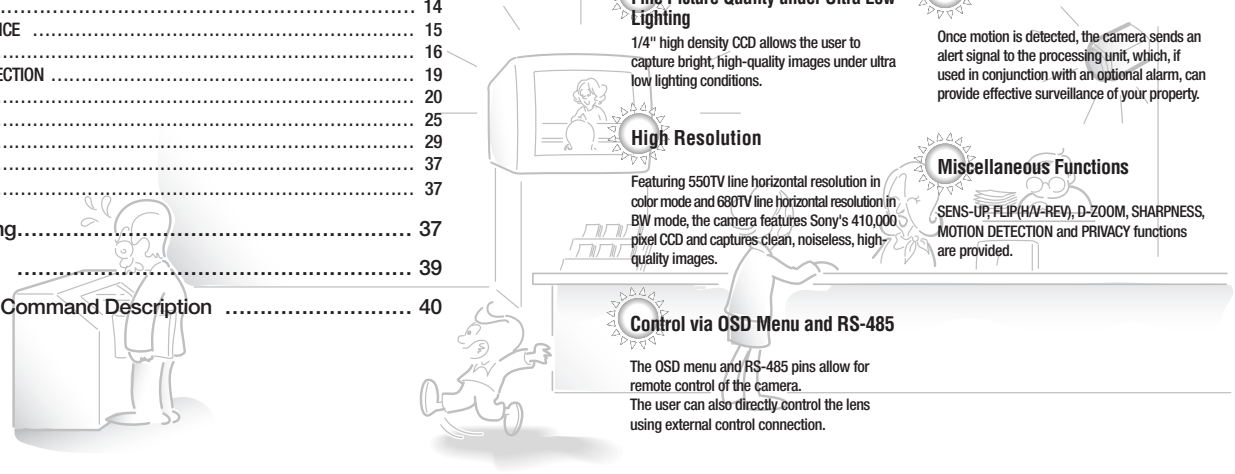


Features

37x Optical Zoom

The built-in SDZ-370 optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.

SSNR (Samsung Super Noise Reduction)

The high performance W-IV DSP chip dramatically reduces the gain noise in digital image precessing, producing clear, sharp images in low lighting environments.

Fine Picture Quality under Ultra Low Lighting

1/4" high density CCD allows the user to capture bright, high-quality images under ultra low lighting conditions.

High Resolution

Featuring 550TV line horizontal resolution in color mode and 680TV line horizontal resolution in BW mode, the camera features Sony's 410,000 pixel CCD and captures clean, noiseless, high-quality images.

Control via OSD Menu and RS-485

The OSD menu and RS-485 pins allow for remote control of the camera.
The user can also directly control the lens using external control connection.

Day & Night

The camera automatically determines whether it is night time or day time, selecting operating mode automatically. The camera operates in color mode during day light conditions and BW mode in night conditions for clearer identification.

DIS(Digital Image Stabilizer)

The DIS function can compensate for vibration of the camera. so it helps you obtain more stabilized image under the shaking conditions.

Motion Detection

Once motion is detected, the camera sends an alert signal to the processing unit, which, if used in conjunction with an optional alarm, can provide effective surveillance of your property.

Miscellaneous Functions

SENS-UP, FLIP(H/V-REV), D-ZOOM, SHARPNESS, MOTION DETECTION and PRIVACY functions are provided.

Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products.The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

Warnings & Cautions

This information is provided to ensure your safety and to prevent any losses, financial or otherwise. Please read it carefully and use the product accordingly.

* For product inquiries, please contact the retail shop where you bought the camera. The use of equipment such as an aerial ladder while providing after-sales service shall be at your expense.
* Separate the power plug when thunder crashes or lighting flashes.
* This product is support equipment for surveillance system. Therefore, we can't compensate for material loss and/or personal injuries by robbery, fire, natural disaster or something like this type.

Warning/Attention/Special Mark Messages

	Ignoring this information may result in material loss and/or serious personal injuries including death.		Ignoring this information may result in material loss and/or a slight injuries.
	Indicates "Never Allowed."		Indicates "No Disassembling."

Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.
This product should not be mixed with other commercial wastes for disposal.

Precautions

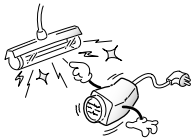
Do not install under extreme temperature conditions.

Use only under temperature conditions between -10ºC and +50ºC. Provide good ventilation when using in high temperature conditions.

Do not install in high humidity environment.

May lower image quality.

Do not install under unstable lighting conditions.



Severe lighting changes or flickering may hinder normal camera operation.

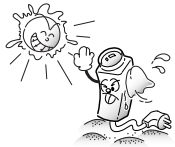
Avoid touching the camera lens.

The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

Do not drop the camera or subject it to physical shock.

May cause a product malfunction.

Never keep the camera face to strong light directly.



May damage the CCD.

Precautions

Do not expose the camera to rain or other types of liquids.

May cause a product malfunction.Wipe dry any liquids. Liquids may contain minerals that are corrosive to electronic components.

Do not expose the camera to radioactivity.

Radioactivity exposure may damage the CCD.

Notes

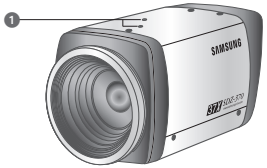
- Exposure to a spotlight or an object emitting strong light may cause smear or blooming.
- Ensure that the power source complies with normal specifications before supplying it to the camera.

Components and Accessories

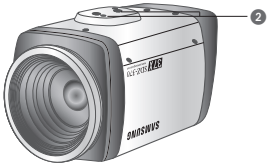
1. 37x Zoom Color Camera SDZ-370
2. Instruction Manual
3. 8-PIN CABLE ASSY

Overview

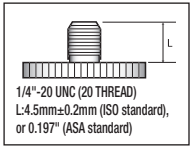
Top



Bottom



1. **Tripod Mounting Bracket Screw Hole**
   Used to fix tripod mounting bracket on top of the camera.
2. **Tripod Mounting Hole**
   Used to install the camera on an optional tripod. The tripod must be equipped with screws with specifications shown on the right.



Attach the bracket to the top of the camera. Use screws included in the package or their equivalent (less than 6mm). Otherwise, the bracket may not assemble to the camera properly.

Bottom View

3 Key Buttons

Following buttons control zoom, focus, and auto focus functions.

WIDE button : To widen the view. (ZOOM OUT)
TELE button : To close in on a far object. (ZOOM IN)
F-NEAR button : To see a near object clearly.
F-FAR button : To see a far object clearly.

Pressing the 'SET' button locks the zoom control function of these buttons and prompts the main setup menu.

Main setup menu can be navigated using these buttons.

SET : To access the main setup menu.
UP (TELE button) : To move the arrow indicator to up.
DOWN (WIDE button) : To move the arrow indicator to down.
LEFT (F-NEAR button) : To move the arrow indicator to left.
RIGHT (F-FAR button) : To move the arrow indicator to right.

4 Power Input Terminal

Power supply terminal (DC12V±10%).

5 Power LED

Illuminates when power is supplied.

6 Video Output Jack

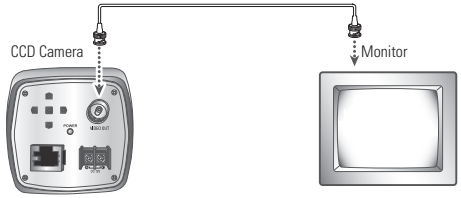
Used to connect an external video monitor in jack.

7 RJ-45 JACK

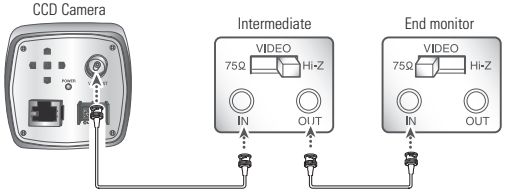
Terminals, such as RS-485 communications, MD OUT, ZOOM, and FOCUS, EX_DN are areincluded.

Connecting to Monitor

Connect Video Out Jack to the monitor's Video In jack as shown below.



- Connection methods may vary depending on the video equipment. Please refer to the model specific instruction manual.
- Connect cables with the unit powered down.
- Set the 75Ω / Hi-Z selection switch as shown below if you have an intermediate device.



Connection

Connecting to Power

DC Power Type (DC 12V, 500mA)

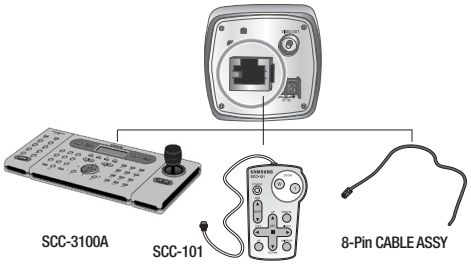
Use DC 12V/500mA power source for SDZ-370N/P.

Notes

- Connect the power once the installation is complete.
- The wire is polarized. Match '+' and '-' terminals properly.

Connecting to 8P Control Terminal

The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)



*** 8P Control Terminal Configuration**

Number	Name	Cable color	Description	Number	Name	Cable color	Description
1	ZOOM	ORANGE	-	5	GND	BLUE	-
2	FOCUS	WHITE/ORANGE		6	EX DN	WHITE/BLUE	External D/N
3	COM	GREEN		7	485+	BROWN	RS-485 communication
4	MD OUT	WHITE/GREEN		8	485-	WHITE/BROWN	RS-485 communication

Connector	Function	Signal Level	I/O
ZOOM	Tele	+6V ~ +12V COM	I
	Wide	COM - 6V ~ -12V	
FOCUS	Far	+6V ~ +12V COM	I
	Near	COM - 6V ~ -12V	
COM		COM	-
MD		0V (There is no motion) — 5±0.5sec — +3.0V (There is motion)	O
EX DN		DAY mode: D&N terminals must be OPEN to external signals. (Do not input voltage) NIGHT mode: D&N terminal must be connected to the ground	I

Notes

- MD(Motion Detection) Output Signal Level(less than 10mA)
- When using the MD function, the 'GND' should be connected to the frame ground.
- Do not simultaneously connect the RS-485 (+) (-) communication line when you use voltage control ZOOM and FOCUS, using the RECEIVER BOX (SRX-100B).

* Match the communication setup between devices when you use the wired controller (SCC-101) or SCC-3100A.

ITEM	SCC-101(fixed)	SCC-3100A(Factory Default)
MODE	Serial	Serial
Data Bit	8 bit	8 bit
Bit/Sec	9600bps	9600bps
Parity	EVEN	NONE
CAM ID NO.	0	1~255
RETURN PACKET	ENABLE	See the SCC-3100A manual

Notes

- Contact an authorized technician for inspection.

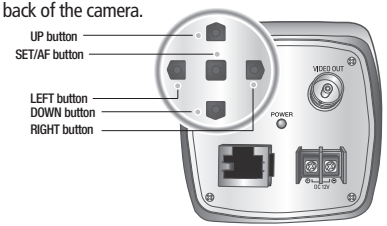
Operating Your Camera

Menu Configuration

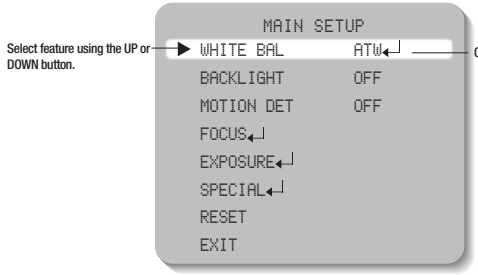
Main Setup Menu			
WHITE BAL	• ATW	• MANUAL	• AWC->SET
	• OUTDOOR	• INDOOR	
BACKLIGHT	• OFF	• BLC	• HLC
MOTION DET	• OFF	• ON	
FOCUS	• MODE	• ZOOM TRK	• ZOOM SPEED
	• D-ZOOM	• ZOOM POS INIT	• USER PRESET
	• LENS INIT	• END	
EXPOSURE	• BRIGHTNESS	• IRIS	• SHUTTER
	• AGC	• SSNR	• SENS-UP
	• END		
SPECIAL	• PRIVACY	• DAY/NIGHT	• DIS
	• COMM ADJ	• IMAGE ADJ	• DISPLAY
	• END		
RESET			
EXIT			

Menu Setup

Use the five buttons on back of the camera.



1. Press the SET button for 2 seconds. (Short-pressing the button activates the AUTO FOCUS).
   • Main setup menu is displayed on the monitor screen.



2. Select the desired feature using the UP or DOWN button.
   • Each pressing of the UP or DOWN button moves the indicator to the next or previous feature.
   • Move the arrow indicator to the desired feature item.
3. Change the status of the selected feature using the LEFT or RIGHT button.
4. When completed, move the arrow indicator to 'EXIT' and press the SET button.

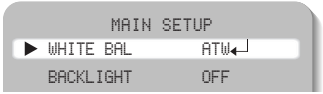
Notes

- Features marked with a ↵ have an accessible submenu.
- Access the submenu by pressing the SET button.

White Balance (White Bal.)

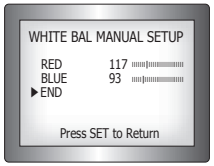
Use the White Balance function to adjust the screen color.

1. When the SETUP menu screen is displayed, select 'White Bal.' by using the Up and Down buttons so that the arrow indicates 'White Bal.' .
2. Select a desired mode using the Up and Down buttons.



✻ Select one of the following 5 modes, as appropriate for your purpose.

- **ATW** : Select this when the color temperature is between 1800ºK and 10500ºK
- **INDOOR** : Select this when the color temperature is between 4500ºK and 8500ºK.
- **OUTDOOR** : Select this when the color temperature is between 1800ºK and 10500ºK. (sodium light inclusion)
- **AWC→SET** : To find the optimal setting for the current luminance environment in this mode, set the point the camera towards a sheet of white paper and press the SET button. If the environment changes, readjust it.
- **MANUAL** : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the SET button.



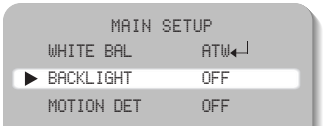
Notes

- White Balance may not work properly under the following conditions. In this case select the AWC mode.
  1. When the color temperature of environment surrounding the subject is out of the control range
  2. When the ambient illumination of the subject is dim.
  3. If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

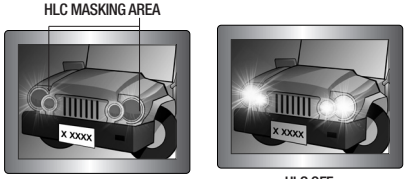
BACKLIGHT

This camera is designed so that it delivers a distinctive subject and background at The same time, even when the subject is in backlight, unlike conventional cameras, By adopting a proprietary W-IV DSP chip.

1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Up and Down buttons so that the arrow indicates 'BACKLIGHT'.



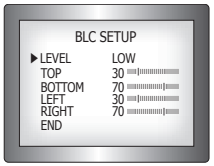
2. Select a desired mode using the Left and Right buttons depending on the camera pupose.
   - **BLC :** Enables a user to directly select a desired area from a picture, and to view the area more clearly.
   - **HLC(High Light Compensation) :** If there is a high light installed in dark environment such as an apartment parking garage or gas station entrance, removing the high light makes it possible to view car license plates efficiently.



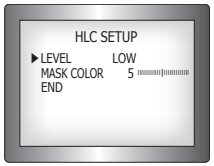
HLC ON HLC OFF

➲ **OFF :** Deactivates the BACKLIGHT function.

3. Select a desired mode using the Left and Right button and press the SET button.
   • Select 'BLC' to adjust the area to be enhanced and enhancement level.



• Select 'HLC' to adjust the HLC MASK COLOR and LEVEL.

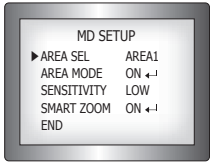


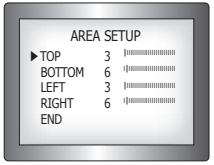
Notes

- You cannot use the BLC mode when MANUAL or A.FLK mode in 'SHUTTER' menu is selected.
- Since the following symptoms may occur according to the ambient illumination when BLC is selected, set it to OFF.
  ❶ Color or screen changes unnaturally.
  ❷ Noise appears in the bright part of the screen.
- Since the performance of the BLC function may be affected by the area of the bright part of the screen, optimize the installation angle for the best BLC performance.
- If you increase LIMIT, the screen display may be distorted.
- For high performance of BLC function, We recommend that you set IRIS to AUTO in the EXPOSURE setup.
- Activating BLC may cause the camera to repeat the Auto Focus operation depending on lighting conditions. It is recommended that you use the Focus Setup menu in One-Push or Manual mode.
- Smart Zoom and BLC cannot be used in conjunction with each other:
- Setting up BLC and then Smart Zoom automatically cancels BLC.
- Setting up Smart Zoom and then BLC automatically cancels Smart Zoom.

Motion Detection

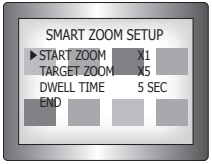
This product has a feature that allows you to observe movements of objects in 4 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected; hence a single individual can conduct supervision efficiently. The camera detects an object's movement by sensing disparity of outline, and level of brightness and color. The camera receives detection signal from MD output terminal.





• Please press the SETUP button.
  - OFF: MOTION DETECTION mode is cancelled.
  - ON: Any motion in the selected areas is observed.

➲ **AREA SEL** : You can select the area you wish to observe from the 8 area.
➲ **AREA MODE** : Determines whether to use the MD area selected in SENSITIVITY
➲ **SENSITIVITY** : You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement



➲ **SMART ZOOM** : Smart zoom is operated in connection with MOTION DETECTION. When the SMART ZOOM function is 'ON' while the MOTION DETECTION mode is 'ON', the zoom goes to the TARGET ZOOM position once motion is detected. Once the zoom action is finished and 'DWELL TIME' has passed, the zoom returns to the 'START

ZOOM' position.

- START ZOOM : Use the left or right button in the 'START ZOOM' item to select the zoom position from 1x to 37x to be returned after the 'SMART ZOOM' action is over.
- TARGET ZOOM : Use the left or right button in the 'TARGET ZOOM' item to select the zoom position from 1x to 37x to be used during MOTION DETECTION.
- DWELL TIME : Use the left or right button in the 'DWELL TIME' item to select a time between 5 and 60 seconds for the dwell time before the zoom is returned to the 'START ZOOM' position. (5,7,10,15,20,30,40,60 sec)

➲ **TOP, BOTTOM, LEFT,RIGHT :** You can adjust the size of the area

Notes

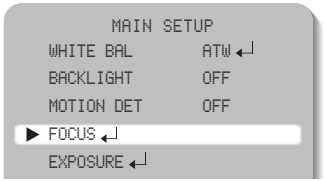
Tips on Using the Motion Detection Feature

- The feature may not function properly under flickering light conditions.
- The camera interprets sudden changes in lighting and subsequent change in brightness of an object as motion.
- With the feature enabled, other algorithms may require additional time to operate than usual.

Notes

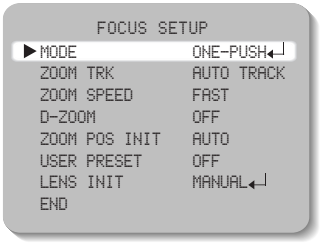
- This system does not guarantee prevention of fire or theft. The manufacturer shall not be held responsible for any accident or damage incurred.
- Connect an external alarm device to MD Out on back of the camera.

FOCUS

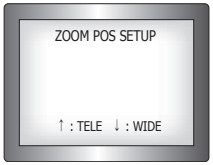


1. Press the SET button to access the main setup manu and then position the indicator over FOCUS using the UP or DOWN button.
2. Press the SET button.

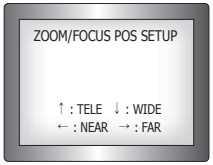
➲ **MODE :** You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using UP or DOWN button.



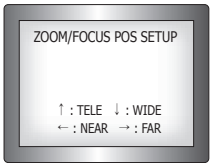
- AUTO : Select AUTO and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the UP or DOWN button while verifying the changes on screen. Enabling D-ZOOM (ON) means that digital zoom will activate once optical zoom ends. Focus is automatically adjusted with moving zoom.



- ONE PUSH : Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained.



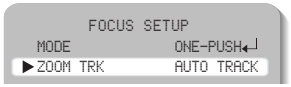
• MANUAL : Select 'MANUAL' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directi onal buttons while verifying the changes on screen. Press the SET button on ce desired image quality is obtained. Focus can be manually adjusted, independent of moving zoom.



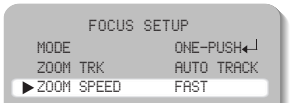
➲ **ZOOM TRK :** Select 'ON' for the 'SMART ZOOM' item in the MOTION DETECTION menu and press SET button to change the settings for the 'SMART ZOOM' function.

Use the left or right button in the 'ZOOM' item to select 'AUTOTRACK' or 'TRACK' and press SET button to activate the zoom action focus function.

• AUTOTRACK: Zooming in while deciding or adjusting the status of the focus.
• TRACK: Zooming in with no relevance to the focus.
• OFF: Only the zoom lens moves.



➲ **ZOOM SPEED :** Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the UP or DOWN button and then set to desired mode using the LEFT or RIGHT button.

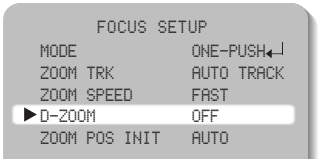


• FAST : To move zoom fast.
• MEDIUM : To move zoom at medium speed.
• SLOW : To move zoom slowly.

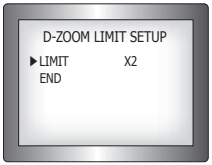
Notes

• The 'ZOOM SPEED' mode cannot be used if 'MODE' is set to 'AUTO' and 'ZOOM TRK' is 'ON'.

➲ **D-ZOOM :** Configure magnification limit from x2~x12 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button. Set 'D-ZOOM' to 'ON' and press the SET button to confirm.



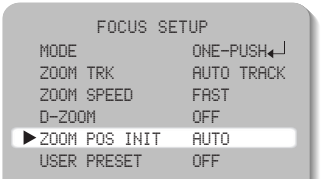
- Set 'ZOOM LIMIT' to the desired level using the LEFT or RIGHT button.



Notes

• When the DIS is enabled, you cannot use the D-ZOOM.

➲ **ZOOM POS INIT:** Moves to the controlled ZOOM position when the power truned on and is a function of the initial ZOOM position control.



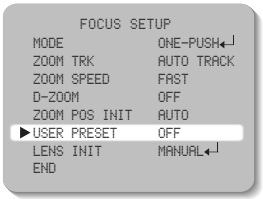
- AUTO :If you turn the power off and on, the zoom magnification level is set to the previous level that was set before the power went off.
- MANUAL : The zoom magnification level can be set from 1x to 37x.

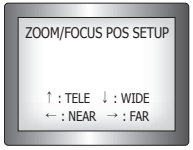
Notes

• The zoom postion is saved after 5 seconds when you set zoom function.

➲ USER PRESET

• Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

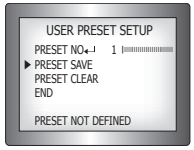




- PRESET NO : Up to 128 preset configuratons are supported.

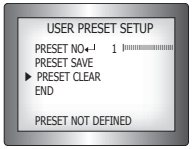
- PRESET SAVE : Save configured preset.

- PRESET CLEAR : Clear configured preset.

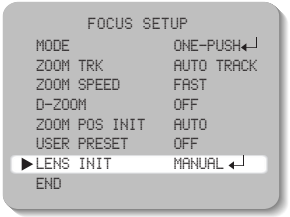


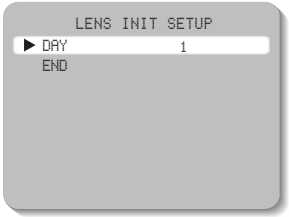
- END : Revert to the FOCUS SETUP menu.

➲ **LENS INIT** : Use the left or right button in the 'Lens initialization' item to select 'Automatic' or 'Manual' and press the SET button to set up the initialization of the lens.



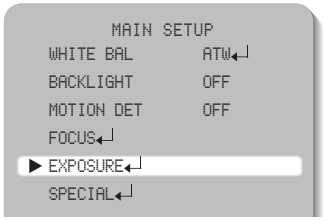
• AUTO : The lens is initialized by setting the date. reset time can be set from 1 day to 7 days and the lens resets every 24 hours from the set time.
• Manual : The Lens will reset when you press the SET button.





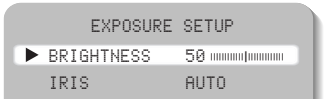
➲ **END :** To revert to the main setup menu.

EXPOSURE

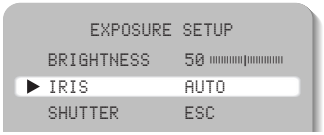


1. Press the SET button to access the main setup menu and then position the indicator over 'EXPOSURE' using the UP or DOWN button.
2. Press the SET button to confirm.

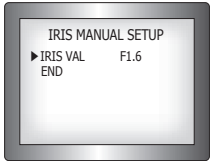
BRIGHTNESS:
Use this feature to adjust image brightness. Position the indicator over 'BRIGHTNESS' using the UP or DOWN button. Then increase or decrease brightness level using the LEFT or RIGHT button while verifying the changes on screen. Set END once desired level is obtained.



IRIS: Set 'IRIS' to 'AUTO' or 'MANUAL'. Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.

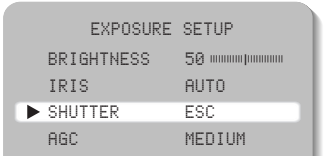


- AUTO: The iris is automatically activated upon illumination.
- MANUAL: Manual iris configuration. Set 'IRIS' to 'MANUAL' using the LEFT or RIGHT button and then press the SET button. Increase or decrease iris level using the LEFT or RIGHT button while verifying the changes on screen.



SHUTTER : Control image brightness by adjusting shutter speed.

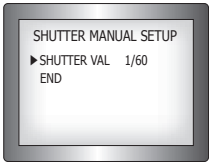
❶ Position the indicator over 'SHUTTER' using the UP or DOWN button. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the LEFT or RIGHT button.



- A.FLK (NTSC: 1/100, PAL: 1/120): Flicker-free mode
- ESC : Automatic shutter speed setting (optimal).
  Auto operation is possible only when the IRIS is set to MANUAL.
- MANUAL: Manual shutter speed setting

❷ If you choose 'MANUAL', select the optimal shutter speed.

- In MANUAL mode, the optimal shutter speed needs to be designated. Select from 1/60 to 1/120,000 (NTSC) or from 1/50 to 1/120,000 (PAL). * 'Sens-Up' mode can be configured manually (2x to 256x).
- Verify changes made to the shutter speed by referencing to changes in on screen brightness.



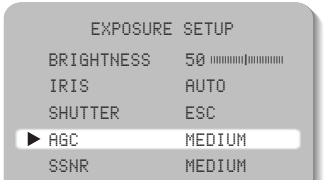
❸ Press the SET button to complete.

Notes

- **Image may become unstable if the camera is set to 'ESC' mode and faces a strong fluorescent light.**
- **Under 'ESC' mode, the brightness can be adjusted using the LEFT or RIGHT button.**

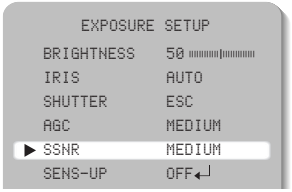
AGC (Auto Gain Control) : For brighter images.

1. Position the indicator over 'AGC' using the UP or DOWN button.
2. Set 'AGC' to the desired mode using the LEFT or RIGHT button.
   - HIGH : Wide range gain value adjustment
   - MEDIUM : MEDIUM range gain value adjustment
   - LOW : Narrow range gain value adjustment
   - MANUAL : Selecting gain value range. (5dB ~ 41dB)
   - OFF : Disabled



SSNR(Samsung Super Noise Reduction): On screen noise reduction.

1. Position the indicator over 'SSNR' using the UP or DOWN button.
2. Set 'SSNR' to the desired mode using the LEFT or RIGHT button.
   - LOW : Low noise reduction
   - MEDIUM : Medium noise reduction
   - HIGH : High noise reduction
   - OFF : Disabled

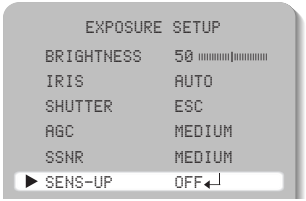


Notes

- Changing 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as on screen noise.
- Setting 'AGC' to OFF locks 'SSNR' configuration.

SENS-UP : This feature ensures clear images at night or under low lighting conditions.

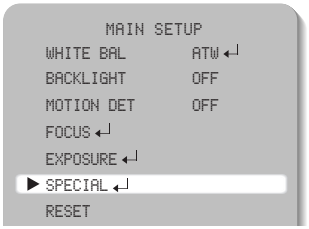
1. Position the indicator over 'SENS-UP' using the UP or DOWN button.
2. Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.
   - AUTO : Select this mode for use in night time or under low lighting conditions.
   - OFF : Disabled



Notes

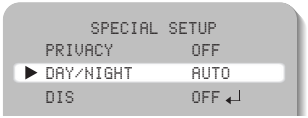
- Once 'AUTO' mode is set, the user can configure Sens-Up limit by increasing /decreasing the shutter speed (e.g.: X2,X4..... X32,X64,X128,X256).
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomenons. This is normal.

SPECIAL



1. Press the SET button to access the main setup menu and then position the indicator over 'SPECIAL' using the UP or DOWN button.
2. Press the SET button to confirm.

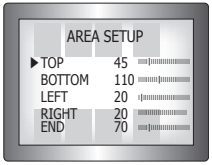
➲ **PRIVACY** : Hide an area you want to hide on the screen.



❶ When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'PRIVACY'.

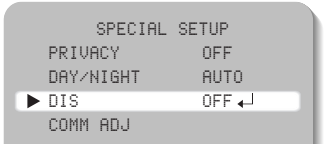
❷ Set up the mode using the 4 direction buttons.

- AREA SEL : You can select up to 8 MD areas.
- AREA MODE : Determines whether to use the area selected in the AREA SEL, and the size and position of the area.
- MASK COLOR : Determine area color. You can select Gray, Green, Red, Blue, Black, White.



- MASK TONE : Determine the transparency of selected area as controlling number from 0 to 3.
- END : Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

➲ **DAY/NIGHT** : You can display pictures in color or black and white.

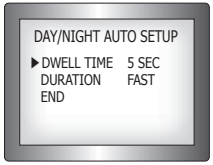


❶ When the SETUP menu screen is displayed, select 'DAY/NIGHT' by using the Up and Down buttons so that the arrow indicates 'DAY/NIGHT'.

❷ Select a desired mode using the Left and Right buttons according to the picture display you want.

- COLOR : The picture is always displayed in color.
- B/W : The picture is always displayed in black and white.
- AUTO : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the sswitching time or speed for AUTO mode, press the SET button.

- DWELL TIME : You can select the duration time about changing the day/night mode. → 5,7,10,15,20,30,40, 60(sec)
- DURATION : You can select brightness of illumination about changing the day/night mode.



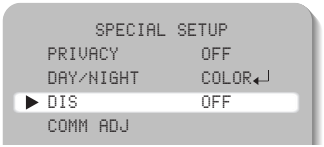
	Color → B/W	B/W → Color
Fast	2.5 lux	4 lux
Slow	0.8 lux	6 lux

- EXT : This mode allows you to apply a desired filter to external signals.

Notes

- When using a Video Auto Iris Lens, if you set the lens level to low, automatic switching between Color and Black & White may not occur.
- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
- The camera may focus less well under infrared illumination than under normal illumination.
- Since the camera may not focus as well under infrared illumination at night as it does under normal illumination, install an Extra-low Dispersion Lens to obtain sharp pictures.
- The brightness of illumination is changeable by installed environment.

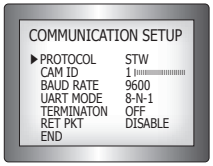
➲ **DIS :** The DIS mode can compensate for vibration of the camera.



Notes

- When DIS is operating, D-ZOOM does not operate.

➲ **COMM ADJ (Communication Adjustment) :**
This function sets up the camera communication status when controlling the camera through an external control device.



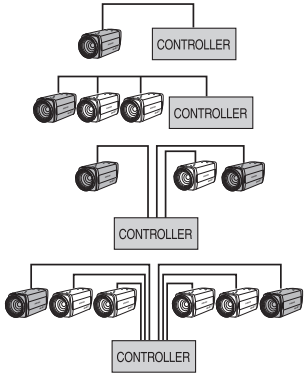
❶ When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'COMM ADJ'.

❷ Set up the mode using the 4 direction buttons.

- CAM ID : Determines the camera's identification number (between 0 and 255).
- Protocol : Select the communication PROTOCOL. (STW/PELCO-D/PELCO-P/ BOSCH/HONEYWELL/VICON/AD/SEC/PANASONIC)
- BAUD RATE : You can select 2400/4800/9600/19200/38400/57600/115200 bps.
- UART MODE : You can select NONE, EVEN or ODD for the parity bits.
- TERMINATION : Function that sets the resistance at the end of RS-485 communications.

✻ Setting Termination Resistance.

In order to prevent signal reduction, the termination resistance of the 2 end units, which are the distant paths for camera and controller to be connected on the RS485 interface, should be connected.
As the termination resistance is built in the camera, whether to make the termination resistance valid or invalid is selected with the TERMINATION.
See the connection diagram for determining to which device the termination resistance will be connected to.
Set up the termination resistance in the dark products.
The installation distance of the product for the termination resistance setting should be less than 1.2 Km. (Maximum cable length is 1.2 Km according to the RS-485 standards.)

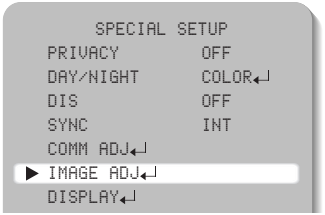


• RET PKT : You can choose whether to send an ACK signal when the communication control command is issued to the camera.

Notes

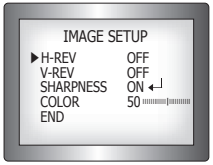
• If Camera is controlled by the Vicon Controller,function button may not work properly.

IMAGE ADJ : Includes image quality or special function factors.



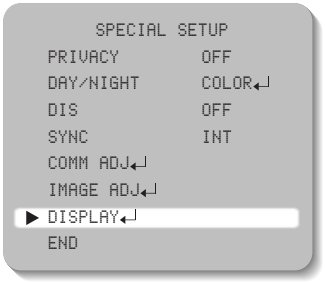
1. When the SETUP menu screen is displayed, select 'IMAGE ADJ.' by using the Up and Down buttons so that the arrow indicates 'IMAGE ADJ.
2. Select a desired mode using the Up and Down buttons.

• H-REV : You can flip the picture horizontally on the screen.
• V-REV : You can flip the picture vertically on the screen.
• SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer.



• COLOR : Adjusting this value affects the chroma level only; the burst level is unaffected.
• END : evert back to the USER PRESET menu.

DISPLAY : Use this feature to designate a name for the camera, which will display on the monitor screen

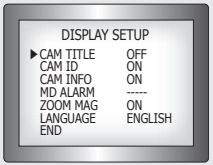


CAM TITLE

1. Press the SET button to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the UP or DOWN button.
2. Set 'CAM TITLE' to 'ON' using the LEFT or RIGHT button.

Notes

• If the CAM TITLE feature is set to 'OFF', the name will not displayed in the monitor



❸ Press SET button.

❹ You can enter up to 20 characters.

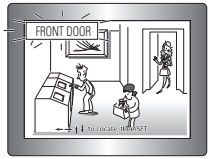
a. Move the cursor to the character entry field using the LEFT or RIGHT button.
b. Use UP, DOWN, LEFT and RIGHT buttons to select a desired character.
c. Press the SET button to confirm selection of the blinking character. The character is then saved, and the cursor in the entry field moves to the next position.
d. Repeat steps a through c until the desired name has been entered.

Notes

• Correcting Mistakes

Move the cursor th 'CLR' and press the SET button to clear the entire entry. To modify one character, use LEFT or RIGHT to position the cursor above the character to be modified and click the SET button after selecting the character to enter.

❺ Enter a title, move the cursor to 'POS' and press the SET button. The entered title appears on the screen. Select the position to display the title on the screen by using the 4 direction butons and press the SET button.
When the position is determined, select.



- CAM ID : Displays camera ID on top left corner of the screen.
- CAM INFO : Displays camera information on screen.
- MOTION ALARM : You can toggle the use of the camera alarm.
- ZOOM MAG : Use this feature to display the current zoom magnification level on screen. Position the indicator over 'ZOOM MAG' using the UP or Down button. Then set to ON using the LEFT or RIGHT button.
- LANGUAGE : You can select the menu language according to your requirements (Korean, ESPANOL, FRANCAIS, ITALIANO, DEUTSCH, ENGLISH, Japanese, Chinese)
- END : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

Troubleshooting

If you have trouble operating your camera, refer to the following table.
If the guidelines do not enable you to solve the problem, contact an authorized technician.

- **Nothing appears on the screen.**
  - Check that the power cord and line connection between the camera and monitor are fixed properly.
  - Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
- **The image on the screen is dim.**
  - Is lens stained with dirt? Clean your lens with soft, clean cloth.
  - Set the monitor to proper condition.
  - If the camera is exposed to too strong light, change the camera position.

Troubleshooting

- **The image on the screen is dark.**
  - Adjust the contrast feature of the monitor.
  - If you have an intermediate device, set the 75Ω / Hi-z properly.
- **The camera is not working properly, and the surface of the camera is hot.**
  - Check that you have properly connected the camera to an appropriate power source.
- **The DAY/NIGHT menu does not work.**
  - Check that AGC of EXPOSURE SETUP menu is 'OFF'.
- **The SENS-UP function does not work.**
  - Check that AGC of EXPOSURE SETUP menu is 'OFF'.
  - Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.
- **The Motion Detection function does not work.**
  - Check that MOTION DEF of SPECIAL SETUP menu is 'OFF'.
- **Color is not correct.**
  - Check the setting of WHITE BAL SETUP menu .
- **The screen flickers continually.**
  - Check that direction of camera turns toward the Sun.
- **RS-485 communication fails.**
  - Check the polarity between RS-485 Control Port and RS-485 cable.

485 Control Board Connection Port	RS-485 Control Port
(+) CONNECTION TERMINAL (TRX+)	485+
(-) CONNECTION TERMINAL (TRX-)	485-

  - Check the RS-485 Communication establishment initial value

* RS-485 Communication establishment initial value

Item	Camera ID	BAUD RATE	UART MODE	RET PKT
Initial value	1	9600	8-NONE-1	DISABLE

  - We recommend that you make ground connect between camera and controller in order to maintain safety communication control.

Specifications

		SDZ-370N	SDZ-370P	Note
POWER	Input Voltage	DC 10.8V ~ 13.2V (Recommended : 12V)		
	Power Consumption	2.8 W : Steady-state (at 12V) 5.1 W : Max. (Zoom, Focus, Day&night motor operating, at 12V)		
CCD	Size	1/4 Inch, Super HAD color CCD		
	Total Pixels	811(H) x 508(V)	795(H) x 596(V)	
	Effective Pixels	768(H) x 494(V)	752(H) x 582(V)	
OPTICS	Optics	37X, f=3.5 to 129.5mm(F1.6 to 3.9)		
	Min. Focus Distance	1500mm		
	D. ZOOM	OFF/ON (Limit 12x)		
	Angle Field of view	H : Appr. 55.5°(Wide) to 1.59°(Tele) V : Appr. 42.5°(Wide) to 1.19°(Tele)		
Sync.	Scanning System	2:1 Interlace		
	Synchronization	Internal		
	Frequency	H: 15.734KHz / V: 59.94Hz	H: 15.625KHz / V: 50.00Hz	
ELECTRICAL	Resolution	550 TV Lines(Min.) : Color / 680 TV Lines(Min.) : B/W		
	Min. Illumination	0.4 Lux/F1.6(50IRE): Color/0.02 Lux/F1.6(50IRE): B/W		
	S/N (Y signal)	50 dB		(AGC OFF, Weight ON)
	Video Output	CVBS (1.0Vp-p/75Ω)		
	Focus	AUTO/MANUAL/ONE-PUSH		
	Zoom Movement Speed	2.5 Sec		Wide to Tele
	IRIS Control	AUTO/MANUAL		
	Lens Initialize	Built-In		
	Camera Title	ON/OFF		20 characters
	Camera ID	256EA		ID:000 -> Remote only
	Day & Night	AUTO/COLOR/BW/EXT		IR-Cut Filter
	Gain Control	LOW/MEDIUM/HIGH/MANUAL/OFF		Removable
	White Balance	ATW/AWC/MANUAL/INDOOR/OUTDOOR		
	BACK LIGHT	BLC/HLC/OFF		
	Shutter Speed	AUTO/MANUAL/A.FLK		1/120,000sec~X256
	O.S.D	KOREAN,ESPANOL,FRANCAIS,ITALIANO,DEUTSCH,ENGLISH,JAPANESE, CHINESE : total 8 language		
	Motion Detection	ON/OFF		
	Control Output	RS-485 (2400/4800/9600/19200/38400/57600/115200bps)		
	SSNR	LOW/MEDIUM/HIGH/OFF		
	Privacy Function	ON/OFF (8 Zones)		
	FLIP	ON/OFF		
	MIRROR	ON/OFF		
	DIS	ON/OFF		
	PRESET	128 Positions		
	PROTOCOL	STW, PELCO-D, PELCO-P, SEC, PANASONIC, VICON, AD, HONEYWELL, BOSCH		
Operating Temperature/Humidity		-10℃ to +50℃ / 20% to 80% RH		
Storge Temperature/Humidity		-20℃ to +60℃ / 20% to 95% RH		
Dimension		67.6(W)X67.6(H)X124.7(D) mm		
Weight		450g		

STW Protocol Command Description

Command Name		Byte1	Byte2	Byte3	Byte4 ll Byte5	Byte 6	Byte7	Byte8	Byte9	Byte10	Byte11
	Command Packet	STX	CAM ID	HOST ADDR	CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
	Return Packet	STX	CAM ID	HOST ADDR	CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
	Checksum	CHECKSUM CALCULATION: UNARY OPERATION OF SUMMATION FROM BYTE2 TO BYTE9. EX) CHECKSUM = ~(BYTE2+BYTE3+... +BYTE8+ BYTE9);									
Reset	Function	Reset all data to factory default value.									
	Command Packet	A0h	CAM ID	HOST ADDR	000Fh	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	000Fh	00h	00h	00h	00h	AFh	CHECK SUM
Focus Far	Function	Move focus lens to far direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
Focus Near	Function	Move focus lens to near direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
Zoom Wide	Function	Move zoom lens to wide direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM
Zoom Tele	Function	Move wide lens to tele direction.									
	Command Packet	A0h	CAM ID	HOST ADDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM
ZOOM Direct	Function	Move ZOOM lens to specific position directly									
	Command Packet	A0h	CAM ID	HOST ADDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM
	Parameter	P1, P2: OPTICAL ZOOM = 0000h~06EAh P3: DIGITAL ZOOM = ((256*10)/Ratio)-1 ex) D-ZOOM 1.1x : P3 = E7h = ((256*10)/11)-1, Ratio 11 means 1.1x. D-ZOOM 2.0x : P3 = 7Fh = ((256*10)/20)-1, Ratio 20 means 2.0x.									
AF Stop	Function	Stop zoom & focus lens moving.									
	Command Packet	A0h	CAM ID	HOST ADDR	0000h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0000h	00h	00h	00h	00h	AFh	CHECK SUM
One push AF	Function	Unconditionally execute auto focus.									
	Command Packet	A0h	CAM ID	HOST ADDR	0045h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0045h	00h	00h	00h	00h	AFh	CHECK SUM

STW Protocol Command Description

User Preset Save	Function	Save current user preset configuration information.									
	Command Packet	A0h	CAM ID	HOST ADDR	0003h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0003h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~80h(USER PRES ET 128)									
User Preset Exec.	Function	Execute selected user preset.									
	Command Packet	A0h	CAM ID	HOST ADDR	0007h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0007h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~80h(USER PRES ET 128)									
User Preset Clear	Function	Clear selected user preset.									
	Command Packet	A0h	CAM ID	HOST ADDR	0005h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0005h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1:00h(USER PRESET 1) ~80h(USER PRES ET 128)									
OSD Menu On/Off	Function	Display OSD menu on the screen. Clear OSD menu and save current menu setup.									
	Command Packet	A0h	CAM ID	HOST ADDR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM
	Parameter	P1: 00h = ON 01h = OFF									

STW Protocol Command Description

OSD Menu Up	Function	Move OSD arrow to up.									
	Command Packet	A0h	CAM ID	HOST ADDR	0008h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0008h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Down	Function	Move OSD arrow to down.									
	Command Packet	A0h	CAM ID	HOST ADDR	0010h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0010h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Left	Function	Move OSD arrow to left.									
	Command Packet	A0h	CAM ID	HOST ADDR	0004h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0004h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Right	Function	Move OSD arrow to right.									
	Command Packet	A0h	CAM ID	HOST ADDR	0002h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0002h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu Set	Functio	Move to inside menu									
	Command Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
OSD Menu ESC	Function	Move to upper menu.									
	Command Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
	Return Packet	A0h	CAM ID	HOST ADDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM

DECLARATION OF CONFORMITY

Application of Council Directive(s)	89 / 336 / EEC
Manufacturer's Name	SAMSUNG TECHWIN CO., LTD
Manufacturer's Address	SAMSUNG TECHWIN CO., LTD
	42, SUNGJU-DONG CHANGWON-CITY,
	KYUNGNAM, KOREA, 641-716
European Representative Name	
European Representative Address	
Equipment Type/Environment	CCTV Camera
Model Name	SDZ-370N,SDZ-370P
Beginning Serial NO.	S6400001
Year of Manufacture	2008. 4. 1
Conformance to	EN 50081-1 : 1992
	EMC-Directive 89/336 EEC and 92/31/EEC
	EN 50130-4 : 1996

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

Manufacturer	SAMSUNG TECHWIN CO., LTD	Legal Representative in Europe
Signature	Han Seug Kim	Signature
Full Name	HAN SEUG KIM	Full Name
Position	QUALITY CONTROL MANAGER	Position
Place	CHANGWON, KOREA	Place
Date	2008. 4. 1	Date

MEMO

SAMSUNG TECHWIN

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